

Agilent Ref: 10030712-1  
United States Application Serial No. 10/722,950

### **RESPONSE**

In view of the following remarks, the Examiner is respectfully requested to withdraw the rejections and allow all pending claims.

#### **Formal Matters**

Claims 1, 16-18, 27-29, 53-55 and 57-62 are pending after entry of the amendments set forth herein.

Claims 1, 16-18, 27-29, and 53-55 were examined and rejected.

Claims 1, 27, 53, 57, 58 and 60-62 are amended for clarity. No new matter is added.

In this response, the Applicants address several issues raised in the Advisory Action. The Applicants note that all arguments presented in the prior response still apply with equal force. The Applicants' prior arguments are set forth in this response after the issues in the Advisory Action have been addressed. The Applicants request reconsideration of the claims, in view of the discussion that follows below, in combination with their prior arguments.

#### **Advisory Action - Section 3**

In Section 3 of the Advisory Action, the Examiner argues that certain elements of claims 1, 28, 53, 57 and 60-62, are unclear.

Without any intention to acquiesce to the correctness of any rejection, claims 1, 28, 53, 57, 58 and 60-63 have been amended.

The Applicants submit that the Examiner's concerns outlined in this section of the Advisory Action have been addressed.

#### **Advisory Action - Section 5**

In Section 5 of the Advisory Action, the Examiner withdraws the prior rejection under 35 U.S.C. § 112, second paragraph, and notes that claim 28 still appears to be unclear.

Claim 28 is again amended. The Applicants submit that the meaning of claim 28 should be readily apparent to one of skill in the art: it relates to a method of treating a

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backing element that contains a gasket and is adapted to join with a microarray substrate. Upon joining the backing element and the microarray substrate, an array assay chamber sealed by the gasket is formed.

Withdrawal of this rejection is respectfully requested.

**Advisory Action – Section 11**

In section 11 of the Advisory Action, the Examiner argues that the examined claims merely recite an array reaction chamber as an intended use, rather than as a positively recited element. As such, the Examiner argues that the claims are still obvious in view of the previously cited references.

Without any intention to acquiesce to the correctness of this rejection, claims 1, 53 and 57 have been amended to recite that the backing element is *adapted to* join with a microarray substrate to form an assay chamber.

In view of MPEP § 2173.05(g) and *In re Venezia* 189 USPQ 149 (CCPA 1976), the Applicants submit that a functional limitation reciting “adapted to” should be afforded patentable weight.

At best, the combination of prior art references cited by the Examiner provides a microtiter plate washer containing treated seals. Since this is *not* what is being claimed, this rejection may be withdrawn.

In order to ensure the arguments are preserved for the record, the Applicants' prior arguments are set forth below. The Applicants request reconsideration of the claims, in view of their prior arguments supplemented by the above discussion.

**Rejection under 35 U.S.C. §103 (pages 4-5, item 8)**

Claims 1, 16-18, 27-29, and 53-55 have been rejected under 35 U.S.C. §103 as being unpatentable for allegedly being rendered obvious by Doellgast (U.S. Pat. No. 5,078,164) in view of Matsuzawa et al., (JP2000-300670 A) or Gilmor et al., (U.S. Patent Pub. No. 2003/207,099). In view of the remarks made herein this rejection is respectfully traversed.

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The pending claims are directed to a method for treating a backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket to treat the gasket of the microarray structure.

The Office Action indicates that "Doellgast teaches making a gasket or sealing member that is to have a microarray pattern in the gasket, such that it makes an assembly of individual chambers" (Office Action, page 4). However, applicants respectfully disagree. As demonstrated in Fig. 4 of Doellgast, the recited structure only provides a single cavity (item 18) with a plurality of nozzles (items 60). Due to the nozzles (items 60) the cavity is not a sealed array assay chamber, as indicated in the Office Action. In fact, the structure is further described in Doellgast in column 6, lines 1-22. In addition, column 3, lines 16-26 further states that the structure provides for pressure driven fluid streams through the nozzles. Therefore, if the nozzles are for dispensing fluid, then the cavity necessarily cannot be a sealed chamber.

The Office Action further cites Matsuzawa et al., as "provid[ing] a means for making a rubber gaskets useful with syringes" (Office Action, page 5). As noted in the Office Action the reference fail to teach a sealed array assay chamber. In particular, Matsuzawa et al. teaches a syringe. Since a syringe provides for rapid expulsion of a fluid from the chamber through the needle, it fails to provide a sealed array assay chamber.

The Office Action also cites Gillmor et al, as "teach[ing] use of polydimethyl siloxane (PDMS) for making a membrane used for sealing to the same substrate [and] forming a microarray (of wells not chambers)" (Office Action, page 5). As noted in the Office Action, the cited reference teaches "wells not chambers" (Office Action, page 5). In addition, on page 2, paragraph [0024], the cited reference notes that the "polymer mixture forms a thin lace-like elastomer". Therefore, the cited reference fails to teach a sealed array assay chamber.

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The law is clear that to establish a prima facie case of obviousness, the prior art reference, or references when combined, must teach or suggest **all the claim limitations**. *In re Royka*, 180 USPQ 580 (CCPA 1974). As noted above, all the cited references fail to teach each and every limitation found in the claims of the present application. In particular, the combination of the references fails to teach a method of treating a backing element comprising a gasket for forming **a sealed array assay chamber**.

As such, since the cited reference fails to teach each every limitation found in the claims of the present application, the cited reference fails to render the claims of the present application obvious. Therefore, the Applicants respectfully request that this rejection be withdrawn.

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**CONCLUSION**

The Applicants respectfully submit that all of the claims are in condition for allowance, which action is requested. The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-1078.

Respectfully submitted,

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By

  
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